Illinois Environmental Protection Agency · 2200 Churchill Road, Springfield, IL 62706

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Refer to: L1190400007 -- Madison County
Taracorp
Superfund/Technical Reports

May 26, 1987

Mr. Brad Bradley (5HE-12)
USEPA, Region V
Chicago, Illinois 60604

Dear Mr. Bradley:

This letter serves to inform that the IEPA concurs with the proposal by NL made in their April 24, 1987 Bi-Monthly Progress Report and discussed at our meeting on May 14, 1987. NL proposes to install an additional deep zone monitoring well toward the eastern portion of the site. In addition, this Agency concurs with USEPA's recommendation to install an additional deep zone monitoring well on the southwestern portion of the site in an area believed to be downgradient.

The first well will be located in the area believed to be upgradient of the site and bounded by the following streets: 16th, 18th, Cleveland and State. The second well will be installed to the west of well G103 approximately midway between the well and the railroad. A final determination on well locations will be made in the field by the IEPA, USEPA and NL project coordinators as determined by conditions and site access.

NL is hereby requested to submit an addendum to the work plan describing in detail the additional work associated with well installation, development and sampling. Quality Assurance and Quality Control (QA/QC) requirements will be outlined by USEPA.

To produce data which is comparable to that obtained from existing deep zone wells the new wells must be of similar construction and monitor the same zone as those which IEPA installed in shallow/deep well clusters on site. Diagrams of the construction of these wells are shown in Appendix C of IEPA's September, 1984 draft report "A Land Pollution Assessment of Granite City/Taracorp Industries which was provided to NL previously. In addition the guidance on page 8 of the approved May, 1986 RI/FS Work Plan will be used as modified below.

Field Investigation

Test Boring

The estimated boring depth is 35 feet rather than 50 to 60 feet using hollow-stem augering. NL must explain the specific drilling procedures to be used and the boring log to be produced. Hollow stem augers with an inside diameter of at least 3 1/4 inches will be used and cave-in of in-situ sand will likely occur as augers are withdrawn.

Soil samples must be collected continuously for visual classification rather than at 5 foot intervals. According to the Work Plan selected samples will be analyzed for constituents of concern. However, the samples will not be collected and analyzed because their inclusion will require revisions to the QAPP which may cause unacceptable delays.

A permit for well drilling may be required and is generally obtained by the contracted driller.

Monitoring Well

Construction methods and materials are listed below and a typical monitoring well diagram attached.

Casing:

A 5-foot schedule 40 PVC screen 2-inch ID, flush jointed, threaded with #10 slot (.01 inch) factory slotted will be set in the same elevation interval as the IEPA deep well screens. Schedule 40 PVC, 2-inch ID, flush jointed, threaded casing should extend from the screen to approximately 3 feet above the ground surface and have a PVC cap. All joints should be teflon taped and no glue should be used.

Sand Pack:

Use in-situ sand and 0.43-0.46 mm Ottawa silica sand ("#4 Flint Shot"). The sand pack should extend at least 2 feet above the screen. In existing deep wells it extends from 8 to 19 feet above the screen.

Bentonite Seal:

Use 1/2-inch diameter bentonite pellets to create a 2-foot seal above the sand pack.

Grout:

Use Portland cement with 3-5% bentonite (by volume) to fill the remainder of the hole to the ground surface. Using a 90 pound bag of neat cement, 5 gallons water and 3-5% bentonite (by volume) will produce 7 gallons of grout.

Protective Case:

Use a 4-inch x 5-foot steel protective cover with a padlock. The cover will be set in the grout or concrete if necessary.

Well Development

Well development will be accomplished by bailing and surging slowly and not by pumping alone.

Groundwater Sampling

Sampling procedures and QA/QC procedures will follow those outlined in the RI/FS Work Plan and used for rounds 1 and 2. The following wells and parameters will be sampled for 2 consecutive rounds:

Well	Parameters
2 new deep wells	Work Plan Table 2, 3b Wells Quarter-1 parameters
G101, G103, G108 S & D	Same as above except delete parameters that were undetected or present in insignificant concentrations in both Quarters 1 and 2.

As we discussed on May 21, 1987 this letter will be attached to USEPA's approval letter to NL which includes a schedule for completion of activities.

Should you have any questions on the above, please contact me.

Sincerely,

Kenneth M. Miller

Kenneth M. Miller
Federal Site Management Unit
Remedial Project Management Section
Division of Land Pollution Control

KMM:rd2565g/67-69

Attachment

cc: Terry Ayers
DLPC File Room
Author
Steve Holt -- NL Industries

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ENVIRONMENTAL PROTECTION AGENCY

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Reviewed by

Date 5/26/87